



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                | CONFIRMATION NO.       |
|--|-------------|----------------------|------------------------------------|------------------------|
| 09/359,083   | 07/22/1999  | VIRGIL M. DAVIS      | VISAP016                           | 2317                   |
| 22434  | 7590        | 09/05/2007           |                                    |                        |
| BEYER WEAVER LLP<br>P.O. BOX 70250<br>OAKLAND, CA 94612-0250 |             |                      | EXAMINER<br>LIVERSEDGE, JENNIFER L |                        |
|  |             |                      | ART UNIT<br>3692                   | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>09/05/2007            | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

**MAILED**

Application Number: 09/359,083  
Filing Date: July 22, 1999  
Appellant(s): DAVIS ET AL.

SEP 05 2007

**GROUP 3600**

---

Rupak Nag  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 21, 2007 appealing from the Office action mailed May 9, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US Patent 6,282,522 B1 to Davis et al.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-8, and 34-43 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,282,522 B1 to Davis et al (further referred to as Davis).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Davis discloses an on-line purchase and load (OPAL) server for performing a transaction over a network (column 6, lines 18-26) using a virtual smart card (column 11, lines 1-14), said OPAL comprising a virtual card database having a

Art Unit: 3692

plurality of records (column 10, lines 60-63), each record including a virtual card identifier and a balance corresponding to a single smart card (column 11, lines 20-26 and lines 60-67; column 13, lines 3-6; column 16, lines 6-10 and lines 25-34); a hardware security module (column 8, lines 22-25; column 10, lines 54-58; and column 11, lines 48-67); a smart card emulator that receives smart card commands and processes said commands in conjunction with said virtual smart card database and said hardware security module (column 7, lines 6-21; column 8, lines 22-24; column 10, lines 50-65; and column 11, lines 48-57); a pseudo card reader module that receives said smart card commands over said network and relays said commands to said smart card emulator, whereby said OPAL server performs a transaction over said network using one of said records in said virtual smart card database (column 7, lines 6-21; column 8, lines 22-24; column 10, lines 50-65; and column 11, lines 48-57).

Regarding claim 2, Davis discloses an OPAL server wherein the virtual card database further includes purchase algorithm identifiers (column 17, lines 52-56), and wherein the hardware security module includes a plurality of purchase algorithms that are identified for use by one of said purchase algorithm identifiers, whereby the hardware security module may be used to perform cryptographic functions associated with a purchase (column 22, line 56 – column 24, line 51).

Regarding claim 3, Davis discloses an OPAL server further comprising a user verification module that verifies a user accessing the OPAL server and generates a user

Art Unit: 3692

identifier, the user identifier being suitable to identify one of the virtual smart card records in the card database (column 11, lines 39-47; column 16, lines 52-64).

Regarding claim 4, Davis discloses an OPAL server wherein the smart card emulator and pseudo card reader module are implemented as a single software module (column 12, lines 1-60; column 24, lines 54-60).

Regarding claim 5, Davis discloses an OPAL server wherein the network is an internet over which the OPAL server communicates with a merchant server and a payment server to transact a purchase (column 1, lines 12-16 and column 6, lines 18-65).

Regarding claim 6, Davis discloses an OPAL server wherein the network is an internet over which the OPAL server (Figure 3; column 5, lines 30-38; column 11, lines 1-15) communicates with a bank server and a load server to load value onto the virtual smart card (Figure 10; column 3, lines 21-26; column 5, lines 32-34; column 8, lines 64-66; column 11, lines 1-6).

Regarding claim 7, Davis discloses an OPAL server wherein the network is an internet over which the OPAL server communicates with a web server and an authentication server to authenticate a user (column 13, lines 32-35 and column 26, lines 18-50).

Regarding claim 8, Davis discloses an OPAL server wherein the OPAL server communicates over the network with a payment gateway for funding account authorization and clearing (column 10, lines 27-65).

Regarding claim 34, Davis discloses an OPAL server wherein the smart card emulator is suitable for retrieving one of said records from said virtual smart card database, increasing or decreasing the balance of the record, and then returning the record to the virtual smart card database (column 4, lines 3-5; column 7, lines 11-15; column 14, lines 55-58; column 16, lines 22-38).

Regarding claim 35, Davis discloses an OPAL wherein each record of the virtual smart card database also includes a funding account number wherein the funding account number identifies an account that contains a monetary amount that can be loaded onto a virtual smart card (column 2, lines 24-42).

Regarding claim 36, Davis discloses an OPAL server wherein the OPAL server is further configured to receive a purchase request message from a client terminal, wherein the purchase request message indicates a good or service to be purchased by a user, a user identifier, and a user password (column 4, lines 3-5; column 9, lines 3-10; column 13, line 63 – column 14, line 3).

Regarding claim 37, Davis discloses an OPAL server wherein the OPAL server is further configured to send a draw message request to a payment server, wherein the draw request message indicates an amount of money required to purchase the good or service and a merchant identifier (column 16, lines 22-38).

Regarding claim 38, Davis discloses an OPAL server wherein the OPAL server is further configured to receive a debit command from the payment server, wherein the debit command indicates an amount of money to debit from a respective virtual smart card (column 15, lines 22-28 and lines 37-55; column 19, lines 54-60).

Regarding claim 39, Davis discloses an OPAL server wherein the smart card emulator is configured to debit itself in response to the debit command by the amount of money indicated in the debit command (column 21, lines 38-41 and Figure 11A).

Regarding claim 40, Davis discloses an OPAL server wherein the OPAL server is further configured to send a debit response message to the client terminal, wherein the debit response message informs the user either that the amount of money has been debited from the smart card emulator (column 14, lines 56-58) or that money has not been debited from the smart card emulator due to a lack of sufficient funds (column 16, lines 10-12; column 17, lines 31-34).



Regarding claim 41, Davis discloses an on-line purchase and load (OPAL) server for performing a transaction over a network (column 6, lines 18-26) using a virtual smart card (column 11, lines 1-14), said OPAL comprising a virtual card database having a plurality of records (column 10, lines 60-63), each record including a virtual card identifier and a balance corresponding to a single smart card (column 11, lines 20-26 and lines 60-67; column 13, lines 3-6; column 16, lines 6-10 and lines 25-34); a hardware security module (column 8, lines 22-25; column 10, lines 54-58; and column 11, lines 48-67); a smart card emulator that receives smart card commands and processes said commands in conjunction with said virtual smart card database and said hardware security module (column 7, lines 6-21; column 8, lines 22-24; column 10, lines 50-65; and column 11, lines 48-57); the smart card emulator also configured to send a load request message to a load server, wherein the load request message indicates a virtual smart card identifier and a load amount for a respective virtual smart card, the load amount indicating an amount of money to load onto the respective virtual smart card (column 2, lines 24-42; column 3, lines 21-26; column 5, lines 32-34; column 8, lines 64-66, column 11, lines 1-6); and a pseudo card reader module that receives said smart card commands over said network and relays said commands to said smart card emulator, whereby said OPAL server performs a transaction over said network using one of said records in said virtual smart card database (column 7, lines 6-21; column 8, lines 22-24; column 10, lines 50-65; and column 11, lines 48-57).

Regarding claim 42, Davis discloses an OPAL server wherein the OPAL server is configured to receive a load command from a load server wherein the amount of money indicated in the load request message is loaded onto the respective virtual smart card (Figures 3 and 10; column 2, lines 24-42; column 3, lines 21-26; column 5, lines 30-38; column 8, lines 64-66; column 11, lines 1-15).

Regarding claim 43, Davis discloses an OPAL server wherein the smart card emulator is configured to send a load response message to a client terminal, wherein the load response message informs a user that the amount of money has been loaded onto the respective virtual smart card (column 2, lines 24-42; column 5, lines 32-34; column 7, lines 6-14; column 11, lines 1-6; column 28, lines 16-26).

#### **(10) Response to Argument**

The Appellant's arguments have been considered but are not persuasive.

Appellant argues the enabling of the Davis reference for use of a virtual smart card. Examiner has cited in the previous Office Actions that Davis discloses where the David patent discloses the use and functionality supporting use of a virtual smart card. In the absence of any evidence to the contrary, Examiner continues to maintain that the reference discloses and enables that a virtual smart card can be used. Davis particularly discloses "Further, the functionality of stored-value card 5 may be implemented in software on client terminal 204, that is card 5 may be a "virtual" card.

While the Davis disclosure focuses on transactions using a physical stored-value card, Davis specifically discloses in the just-cited portion that the functionality of a stored-value card as a virtual card is provided for, not just that hypothetically a stored-value card could be a virtual card. Davis discloses that the system as disclosed can be used functionally to support the use of a virtual card.

Appellant argues that Davis does not disclose a "smart card emulator" or a "pseudo card reader module". While Davis does not use these exact terms, the "smart card emulator" and "pseudo card reader module" are operable to receive smart card commands for processing and to receive smart card commands to forward to the smart card emulator respectively. Davis discloses where these operations are performed for a physical stored-value card, and as stated above, Davis discloses where the software is able to support a virtual card. The operation of receiving and processing data, be it from a physical or virtual data, is provided for. Whether card data is gathered from sliding a magnetic strip, or electronically sensed from a card touched to a reader, or collected from keyboard input, the data in each case is collected and processed for affecting transactions using the account which is supported by the account number, whether the account number has associated therewith a physical card or not.

Given the functionality of the "smart card emulator" and the "pseudo card reader module" as disclosed in the present application, these features are used for receiving, relaying and processing card commands in order to affect a transaction. The steps of receiving, relaying and processing card commands are disclosed in the Davis

Art Unit: 3692

disclosure. Davis further specifically discloses where the operations can be conducted using a physical card or a virtual card.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court of the Board is identified by the Examiner in the Related Appeals and Interference section of the Examiner's Answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Jennifer Liversedge




Examiner, Art Unit 3692

Conferees:

Vincent Millin



Kambiz Abdi

  
SPE 3692